

according to the present invention. These figures are in respective combination with Figs. 1A to Fig. 1C. The structures 100 in Fig. 1A to Fig. 1C are partially or totally perforated by virtue of an impression process in a direction from the top face 12 to the bottom face 14, which forms a plurality of tiny gaps 15 on the structures 102 in Fig. 2A to Fig. 2C. After the impression process, the structures 100 in Figs. 1A to 1C are permanently damaged, forming the structures 102 in Figs. 2A to 2C, respectively. As shown in Fig. 2A to Fig. 2C, each of the gaps 15 comprises two edges physically in contact with each other to form a closed gap 15 when a pressure difference between the two sides of the structure 102 is approximately zero. At that time, the gaps 15 are approximately closed (pseudo-closed) and the surface of the structure 102 has a pseudo-planar topography with multiple phases. When the structure 102 swells due to external pressure, the gaps 15 enlarge and become air permeable, and restore again when the external pressure is removed.

In the claims:

1. (Fourth amended) A composite film comprising:
a polymer composite layer having two sides with a plurality of tiny gaps, each of the gaps comprising two edges physically in contact with each other to form a closed gap when a pressure difference between the two sides of the composite film is approximately zero; and
a nonstick sealing layer attached to one side of the polymer composite layer to seal the gaps and make the gaps become air impermeable when

the pressure difference is approximately zero;
wherein when the pressure difference between the
two sides of the composite film increases, each of
the gaps are enlarged by the air pressure exerted on
one side of the composite film and become air permeable,
and restore again while the pressure difference is
removed.

10. (Fourth amended) A composite film comprising a
first layer, and a second layer laminated on the first
layer, the composite film comprising a top face on
the first layer and a bottom face on the second layer,
the composite film being processed by virtue of an
impression process, thereby forming a plurality of
tiny gaps, each of the gaps comprising two edges
physically in contact with each other to form a closed
gap when a pressure difference between the two sides
of the composite film is approximately zero wherein
when the pressure difference between the two sides
of the composite film increases, each of the gaps are
enlarged by the air pressure exerted on one side of
the composite film and become air permeable, and
restore again while the pressure difference is
removed.